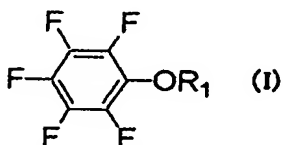


ABSTRACT

The present invention provides a lithium secondary battery which is improved particularly in cycle characteristics. Disclosed is a lithium secondary battery which  
5 uses a non-aqueous electrolytic solution obtained by dissolving electrolyte salt in a non-aqueous solvent. The non-aqueous electrolytic solution further contains a pentafluorophenyloxy compound represented by the formula  
10 (I), and vinylene carbonate and/or 1,3-propanesultone.



In the formula (I), R<sub>1</sub> is a substituent selected from the group consisting of an alkylcarbonyl group having 2 to 12 carbon atoms, an alkoxycarbonyl group having 2 to 12 carbon atoms, an aryloxy carbonyl group having 7 to 18 carbon  
15 atoms, and an alkanesulfonyl group having 1 to 12 carbon atoms. At least one hydrogen atom of the substituent can be substituted with a halogen atom or an aryl group having 6 to 18 carbon atoms.